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ABSTRACT

Concern about violence in schools has resulted in numerous conflict resolution and peer mediation programs being implemented, though there is very little research examining their effectiveness. The exception is the Teaching Students to be Peacemakers program, which teaches students to be peacemakers in five steps: learning what is and what is not a conflict; negotiating integrative agreements to conflicts; mediating classmates' conflicts; implementing the program; and receiving ongoing training. Between 1988-00, the paper's authors conducted 17 studies on the effectiveness of conflict resolution training in eight different schools in two countries. Participating students ranged from kindergarten through ninth grade and attended rural, suburban, and urban schools. Data collection involved observations, interviews, conflict report forms, written and oral responses to conflict scenarios, role playing responses to conflict scenarios, and actual conflicts created with classmates. Results indicated that students learned the conflict resolution procedures taught, retained their knowledge throughout the school year, applied the conflict resolution procedures to actual conflicts, transferred the procedures to nonclassroom and nonschool settings, used the procedures similarly in family and school settings, and, when given the option, engaged in problem solving rather than win-lose negotiations. Appended are 2 tables and 17 Peacemaker Studies References. (Contains 43 references.) (SM)

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Teaching Students To Be Peacemakers: A Meta-Analysis

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Abstract

Concern about violence in schools has resulted in numerous conflict resolution and peer mediation programs being implemented on very little evidence that they are effective. The exception is the **Teaching Students To Be Peacemaker Program**. Between 1988 and 2000 we conducted seventeen studies on the effectiveness of conflict resolution training in eight different schools in two different countries. Students involved were from kindergarten through ninth grades. The studies were conducted in rural, suburban, and urban settings. The findings indicate that students learn the conflict resolution procedures taught, retain their knowledge throughout the school year, apply the conflict resolution procedures to actual conflicts, transfer the procedures to nonclassroom and nonschool settings, use the procedures similarly in family and school settings, and, when given the option, engage in problem-solving rather than win-lose negotiations. The studies demonstrate that conflict resolution procedures can be taught in a way that increases academic achievement.

Keywords

Conflict Resolution

Peer Mediation

Negotiation

Teaching Students To Be Peacemakers: A Meta-Analysis

Why Teach Students To Be Peacemakers

A sizable proportion of students in many countries report feeling unsafe, fearful, or that their school has a violence problem (Kaufman, et al., 1999). Between nine and 16 percent of U.S. high-school students fear going to school because of violence. Providing students with an orderly environment in which to learn and even guaranteeing students' safety is becoming more and more difficult in many schools in the United States (Posner, 1994). An increasing number of public and private school teachers and administrators face situations involving serious conflicts among students and between students and faculty (Stop the Violence, 1994). In the United States, as well as other countries, the general public perceives school safety as the top problem facing U.S., schools (e.g., Elam & Rose, 1995; Elam, Rose, & Gallup, 1994, 1996; Everett & Price, 1995; Furlong & Morrison, 1994; Morrison, Furlong, & Morrison, 1997; Rose, Gallup, & Elam, 1997; Rose & Gallup, 1998). According to international surveys, a sizable percentage of elementary and secondary students rate their own schools as unsafe places (e.g., Benbenishty, Zeira, & Astor, 1998, 1999, 2000; Smith, 1999; Kaufman et al., 1999).

With the concern about violence in schools has come a proliferation of conflict resolution and peer mediation training programs. These programs have diverse origins, including researchers in the field of conflict resolution, advocates of nonviolence, anti-war activists, and members of the legal profession. Very few of these programs are based on theory and research in the field of conflict resolution. Almost none of the programs have been evaluated and very little research has been conducted on the effectiveness of teaching conflict resolution and peer mediation skills (Johnson & Johnson, 1996). Only one of the programs, **Teaching Students To Be Peacemakers** (Johnson & Johnson, 1995a), has generated a series of research studies. Between 1988 and 2000 seventeen studies on the effectiveness of the Peacemaker training were

conducted in eight different schools in two different countries. The purpose of this article is to conduct a meta-analysis summarizing the results of these seventeen studies.

Teaching Students To Be Peacemakers Program

We began formulating the Teaching Students to be Peacemakers Program in the 1960s. It originated from:

1. Our research on integrative negotiations (Johnson, 1967), perspective taking in conflict situations (Johnson, 1967, 1971a), conflict resolution in the school (Johnson, 1970, 1971b; Johnson, Johnson, & Johnson, 1976), communication in conflict situations (Johnson, 1974), and constructive conflict (Deutsch, 1973; Johnson, 1970; Johnson & Johnson, 1979).
2. Social interdependence theory (Deutsch, 1949, 1962; Lewin, 1951; Johnson, 1970; Johnson & Johnson, 1989; Watson & Johnson, 1972).
3. Our training of elementary, junior-high, high-school and college students and adults in how to manage conflicts constructively (Johnson, 1970, 1972/2000, 1978/1991, 1983; Johnson & F. Johnson, 1975/2000). We have implemented the peacemaker program in schools throughout North America, Central and South America, Europe, the Middle East, Asia, and Africa.

Students are taught to be peacemakers in five steps. **First**, they learn what is and is not a conflict and that conflicts potentially have many positive outcomes when they are managed constructively. **Second**, they are taught how to negotiate integrative agreements to conflicts of interests by:

1. **Describing what you want**. "*I want to use the book now.*" This includes using good communication skills and defining the conflict as a small and specific mutual problem.
2. **Describing how you feel**. "*I'm frustrated.*" Disputants must understand how they feel and communicate it accurately and unambiguously.

3. **Describing the reasons for your wants and feelings**. "*You have been using the book for the past hour. If I don't get to use the book soon my report will not be done on time. It's frustrating to have to wait so long.*" This includes expressing cooperative intentions, listening carefully, separating interests from positions, and differentiating before trying to integrate the two sets of interests.
4. **Taking the other's perspective** and summarizing your understanding of what the other person wants, how the other person feels, and the reasons underlying both. "*My understanding of you is...*" This includes understanding the perspective of the opposing disputant and being able to see the problem from both perspectives simultaneously.
5. **Inventing three optional plans to resolve the conflict that maximize joint benefits**. "*Plan A is..., Plan B is..., Plan C is...*" This includes inventing creative optional agreements that maximize the benefits for all disputants and solve the problem.
6. **Choosing the wisest course of action to implement and formalizing the agreement with a hand shake**. "*Let's agree on Plan B!*" The agreement must maximize joint benefits and strengthen disputants' ability to work together cooperatively and resolve conflicts constructively in the future. It specifies how each disputant should act in the future and how the agreement will be reviewed and renegotiated if it does not work.

Third, they are taught how to mediate their classmates' conflicts by.

1. **Ending hostilities and cooling down disputants**. Usually disputants ask the mediator for help. In some cases the mediator may see individuals engaged in a dispute and ask if he or she can be of service.
2. **Ensuring disputants are committed to the mediation process**. To ensure that disputants are committed to the mediation process and are ready to negotiate in good faith, the mediator asks students if they want to solve the problem and does not proceed until both answer "yes." The mediator then explains that mediation is voluntary, he or she is neutral and will not take sides, each person will have a chance to speak without being interrupted, and each person must follow the a set of six rules [*(1) agree to solve*

the problem, (2) no name calling, (3) do not interrupt, (4) be as honest as you can, (5) if you agree to a solution, you must abide by it (you must do what you have agreed to do) and (6) anything said in mediation is confidential].

3. **Helping disputants successfully negotiate with each other**. The mediator carefully takes the disputants through the integrative negotiation procedure.
4. **Formalizing the agreement**. The mediator formalizes the agreement by completing a **Mediation Report Form** and having disputants sign it and shake hands as a commitment to implement the agreement and abide by its conditions. The mediator becomes the keeper of the contract and checks back with the disputants a day or so later to see if the agreement is working.

Fourth, once students have completed the initial training, the teachers implement the Peacemaker Program. Each day the teacher selects two class members to serve as official mediators. Any conflicts students cannot resolve themselves are referred to the class mediators. The mediators work in pairs. They wear official T-shirts, patrol the playground and lunchroom, and are available to mediate any conflicts that occur in the classroom or school. The role of class mediator is rotated throughout the class or school so that all students serve as class mediator an equal amount of time. If peer mediation fails, the teacher mediates the conflict. If teacher mediation fails, the teacher arbitrates by deciding who is right and who is wrong. If that fails, the principal mediates the conflict. If that fails, the principal arbitrates.

Fifth, students receive further training throughout the academic year to enhance and refine their negotiation and mediation skills.

The initial Peacemaker training typically lasts for ten to twenty hours and is usually spread out over several weeks and given to all students in a class or school. The Peacemaker Program is based on the assumptions that (a) all students should know how to negotiate integrative agreements to their conflicts and how to mediate schoolmates' conflicts, (b) all students should have the skills to use the negotiation and mediation procedures effectively, (c) the norms, values, and culture of the school should promote and support the use of the negotiation and mediation

procedures, (d) peer mediators should be available to support and enhance students' efforts to negotiate, and (e) the responsibility for peer mediation should be rotated throughout the entire student body so that every student gains experience as a mediator.

Despite the implementation of a wide variety of conflict resolution and peer mediation programs, what is unknown is whether the training programs result in students actually learning negotiation and mediation procedures, applying the procedures in actual conflict situations, using the procedures in nonclassroom and nonschool settings, and retaining the procedures over time. It is also unknown whether the training can be integrated into academic subject areas in ways that increase achievement. We have conducted a systematic program of research to assess the effectiveness of the **Teaching Students To Be Peacemakers Program** and validate the theory on which it is based. The studies have focused on the following concerns:

1. Are schools justified in being concerned about the frequency and destructiveness of conflicts among students?
2. When given training, do students successfully learn the conflict resolution procedures?
3. Do students maintain their knowledge over time?
4. Do students apply the conflict resolution procedures to actual conflicts?
5. Do students transfer the conflict resolution procedures to nonclassroom and nonschool settings?
6. Do students use the conflict procedures in the family setting?
7. Do students achieve at a higher level when learning the conflict procedures in combination with academic learning?
8. Do students use a problem-solving approach to negotiations when placed in a situation where they can use either a win-lose or problem-solving approach.
9. Do faculty, administrators, and parents perceive the conflict resolution in positive ways?
10. Will the integration of peacemaker training into academic units enhance or interfere with academic learning or the learning of the negotiation and mediation procedures?

11. Will the peacemaker training affect the frequency with which students use the integrative negotiation procedure when they are given a choice between seeking distributive or integrative outcomes?
12. Can the peacemaker training be initiated with very young children such as kindergartners?

Method Of Our Mediation Studies

Participants

Participants came from eight different schools in two different countries and were from kindergarten through the ninth grade (see Table 1).

-----Insert Table 1 About Here-----

Independent Variable

In the studies included in the meta-analysis, the independent variable was the presence versus the absence of conflict resolution training. In the **experimental condition**, students participated in the Peacemaker training. In the **control condition**, students did not receive the training. The training programs lasted from nine to fifteen hours in length. Eleven of the studies involved control groups. In seven of the studies, classrooms and/or controls were selected randomly from the school; in four studies students were assigned randomly to conditions. In nine of the studies teachers were rotated across conditions.

Dependent Measures

A variety of dependent variables were employed in the studies. Not every dependent variable was assessed in every study and different versions of a dependent version were used in different studies. One dependent variable was academic achievement and retention. It was measured by paper and pencil tests and interviews in which participants responded to questions about the material they had studied. Retention measures were administered anywhere from three

weeks to one year after the study had ended. Another dependent variable was knowledge of the negotiation and mediation procedures taught. The How I Manage Conflicts Measure was aimed at assessing students' total recall of the steps in the negotiation procedure. Students were asked to write out step by step how they would resolve a conflict. Responses were scored for the presence of the six steps of the negotiation procedure. Retention was measured anywhere from three weeks to one year after the training had ended.

Another dependent variable was the application of the negotiation procedure to actual conflicts. The use of the negotiation and mediation procedures in actual conflicts were measured. Students received one point for each step of the procedures they used correctly.

The strategy used to manage conflicts was measured by two scales. The Conflict Scenario Written Measure was given to all participating students usually the day before the training began and the day after training ended. A brief scenario was given that ended in an unresolved conflict. Each student was asked to indicate what he or she would do if actually in the situation. Three different forms of this measure were used--a paper and pencil measure in which students read the scenario and responded in essay form, an interview in which students were read the scenario and described what he or she would do, and a video-taped enactment in which students were asked to role play with another student what they would do to resolve the conflict. Responses were categorized in two ways--a category system derived from a series of content analyses of students' responses and the categories specified by Conflict Strategies Constructiveness Theory (Johnson & F. Johnson, 1994). In the content analysis, the strategies were placed on a continuum from 0 to 12 from most destructive (physical and verbal aggression and avoidance) to most constructive (invoking norms for appropriate behavior, proposing alternatives, and negotiating). The continuum was built by consensus among two professors and two graduate students in social psychology. Responses were classified according to the strategy used to deal with the conflict. The strategies were arranged in a hierarchy ranging from most destructive (physical aggression) to most constructive (full negotiations) and assigned points. The strategies were (with number of points given in parentheses): physical aggression (1), verbal threats (2),

unsatisfactory withdrawal (3), telling the teacher (4), commanding or requesting the other to give in (5), satisfactory withdrawal (6), invoking norms the other should conform to (7), proposing alternatives for the other to do (8), expressing intent to negotiate ("I would negotiate") (9), negotiating for mutual agreement with some steps present ("I would negotiate an agreement we both would like") (10), negotiating for mutual agreement with most steps present ("I would try to understand his/her point of view and negotiate an agreement we both would like) (11), and full integrative negotiation (all steps in the procedure present) (12). The data were also classified according to the Two-Concerns Conflict Strategies Theory (Johnson, 1972/2000; Johnson & F. Johnson, 1975/2000). This theory assumes participants in a conflict have two concerns: achieving their goal and maintaining a good relationship with the other person. When those two dimensions are combined, the five strategies of withdrawing, forcing, smoothing, compromising, and negotiating result. The strategies were placed on a continuum from 0 to 5.

Another dependent variable was the degree to which students engaged in distributive versus integrative negotiations. It was measured by the Integrative Bargaining Measure given to all participating students before the study began and after the study ended. The measure was adapted from ones developed by Johnson (1967) and Pruitt (1981) and comprised two bargaining exercises. In the first, students were randomly assigned to pairs consisting of a buyer and a seller negotiating over the exchange of three commodities (e.g., pencils, pens, and markers). In the second, students were randomly assigned to pairs consisting of co-workers with equal status in a manufacturing company, (each representing a different department) negotiating over additional vacation hours for the completion of three company projects. In both exercises, students within each pair could negotiate in ways that would maximize their own outcomes (distributive negotiation) or maximize joint outcomes (integrative negotiation). The degree to which the agreement maximized joint benefit (determined by adding together the outcome of both negotiators) was used as a measure of integrative negotiations.

Another dependent variable was attitudes toward conflict. It was measured in two ways. The Conflict Word Association Measure is a paper and pencil measure that asks students to write

words that came to mind when thinking of conflict. Words were counted and categorized as (a) positive (feelings, actions, or outcomes associated with the constructive resolution of conflict), (b) negative (feelings, actions, or outcomes associated with the destructive resolution of conflict), or (c) neutral (neither positive nor negative nor a definition). The second measure of attitudes consisted of two forms included in required student notebooks. Students were required to keep an academic notebook in which they completed assignment sheets. Two forms, the Teaching Reflection Form and the Weekly Reflection Form, were an unobtrusive measure of students' positive interest in the conflict resolution training.

Another dependent measure was the resolutions of the conflicts. A content analysis on student responses resulted in the following categories: no agreement, third-party imposed agreement, avoidance of each other, other wins, you win, forgiving and apologizing, new solution agreeable to both developed (such as a compromise or a decision determined by chance), and fully negotiated mutual. The solutions were placed on a continuum from 0 to 8 from most destructive (no solution, authority imposed solution, winner take all) to most constructive (proposing new solution, reaching an integrative agreement).

Another dependent measure was a mediator report form on which peer mediators recorded the following information: Date, the names of the mediators, the names of the students involved in the conflict, who referred the students for mediation, the type of conflict, the strategies used during the conflict, whether the conflict was resolved or not, and if so the agreed on solution. The information contained in the conflict reporting forms can be analyzed into type of conflict reported, strategies students used during the conflict, and the agreed upon solutions. Two classification systems were used to determine the types of conflicts occurring in the school. Deutsch (1973) theoretically defined five types of conflicts: control of resources (such as books, computers, athletic equipment, television sets), preferences (what game to play, what activity to do first), values (what "should be"), beliefs (what "is"), or the nature of the relationship between the individuals involved (who is dominant, what kind of friendship to have). In our research studies we have conducted a series of content analyses that resulted in categorizing conflicts into seven

types: aggression/fights, insults/put-downs/rumors, playground conflicts, turn-taking conflicts, possession/access conflicts, preferences/values/beliefs (what I prefer, what I believe is fact, what I think "should be"), and conflicts over academic work.

All student responses were coded independently by two different coders who were advanced doctoral students in social psychology. A 97 percent agreement level was found using the ratio of agreements to coded occurrences.

Effect Size

Whenever possible, the findings of the peacemaker studies were converted to effect sizes (Cohen, 1987; Cooper, 1989; Glass, McGaw, & Smith, 1981; Hedges & Olkin, 1985; Hunter, Schmidt, & Jackson, 1982). The effect size *d* was the difference between treatment divided by the pooled standard deviation of the two groups (Cohen, 1989).

Results Of Our Mediation Studies

Before Training

Before training, most students were found to be involved in conflicts daily. These conflicts were rarely managed constructively. Untrained students indicated they would resolve the conflicts by either forcing the other person to submit (repeating their request, using threats, aggression, commands for the other to give in, and other competitive strategies to "win") or withdrawing unsatisfied from the situation and the relationship. In the urban elementary school, physical force and verbal intimidation were the two most frequent strategies reported. Very few students indicated they would give up their goals to maintain a high-quality relationship with the other person. No untrained student used problem-solving negotiations as a means to resolve the conflicts. Students often would refer the conflict to the teacher. One of the teachers, in her log, stated, "*Before training, students viewed conflict as fights that always resulted in a winner and a loser. To avoid such an unpleasant situation, they usually placed the responsibility for resolving conflicts on me, the teacher.*" These findings indicated that students were generally not being

taught negotiation procedures and skills in the home or community at large and, therefore, that they needed to be trained in how to manage conflicts constructively.

Types And Frequencies Of Conflicts

Data were collected on the types of conflicts student were involved in and how frequently each type occurred. In the urban elementary school the vast majority of conflicts referred to mediation involved physical and verbal violence. In the suburban schools, the majority of conflicts were over the possession and access to resources, preferences about what to do, playground issues, and turn-taking. A small percentage of the conflicts involved physical and verbal aggression. More different types of conflicts were reported at school than at home. The conflicts at home tended to be over preferences, possessions, and access; few conflicts were reported over beliefs and relationships or involved physical fights and verbal insults. Very few conflicts occurred over academic work in either setting. Value conflicts were almost never reported.

Learning Of Negotiation And Mediation Procedures

Following training, students were given a test requiring them to write from memory the steps of negotiation and the procedures for mediation. Across our studies, over 90 percent of the students accurately recalled 100 percent of the negotiation steps and the mediation procedure. Up to a year after the training had ended, on average over 75 percent of students were still able to write out all the negotiation and mediation steps. These results indicate that the training was quite effective in teaching students the negotiation and mediation procedures. The average effect size for the studies was 2.25 for the immediate post-test and 3.34 for the retention measures (see Table 2).

Application Of Negotiation And Mediation Procedures To Conflicts

Learning the negotiation and mediation procedures does not necessarily mean that students will use them in actual conflict situations. We used both paper-and-pencil and observation

measures to determine whether students could use the procedures in actual conflicts. Students completed Conflict Report Forms on any conflict they were involved in or were observed in actual conflicts with their classmates. The results (see Table 2) indicate that students were quite good at applying the negotiation and mediation procedures. Immediately after training, students applied the procedures almost perfectly (effect size = 2.16) and were still quite good months after the training was over (effect size = 0.46).

Strategies Used To Manage Conflicts

Five measures were used to measure the strategies students used in managing their conflicts:

1. Conflict Report Forms on which students periodically recorded the conflicts they were involved in.
2. Written responses to conflict scenarios: Students were given descriptions of conflict situations (such as a conflict over access to a computer or a personal insult through name calling) and asked to write out how they would resolve the conflict.
3. Oral responses to conflict scenarios given in an interview: Students were individually interviewed. A description of a conflict was read to them, and they were asked to explain how they would resolve it.
4. Role playing responses to conflict scenarios that were videotaped: Students were randomly assigned to pairs, each assigned a role in a common conflict, and asked to role play how they would resolve it. They were videotaped doing so.
5. Actual conflicts created with a classmate: Students (a) ranked several alternative ways of completing an assignment, (b) were paired with another student who ranked the alternatives differently, (c) resolved the conflict by deciding which alternative to adopt, and (d) wrote out the actions they took (step by step) to resolve the conflict. each pair member described what was done to reach the agreement on a form.

The results from the different measures were consistent. The diversity of these measures adds validity and generalizability to the results. Responses were categorized in two ways. A content

analysis was conducted that resulted in a 12-point continuum from destructive (physical and verbal aggression and avoidance) to constructive (invoking norms for appropriate behavior, proposing alternatives, and using the problem-solving negotiation procedure) actions. The data were also classified according to the Two-Concerns Conflict Strategies Theory (Johnson & F. Johnson, 2000) which proposes that disputants have two concerns: achieving their goals and maintaining a good relationship with the other person. When these two dimensions are combined, the five strategies of withdrawing, forcing smoothing, compromising, and negotiating to solve the problem result. Overall, from Table 2 it may be seen that for the Strategy Constructiveness Scale, the average effect size was 1.60 on the post test and 1.10 for the retention tests. For the Two-Concerns Scale, the post-test effect-size was 1.10 and the retention effect size was 0.45. Trained students tended to use the integrative negotiation and mediation procedures in resolving the conflicts. There were no significant differences between males and females in the strategies used to manage conflicts. Although the training took place in school, and focused on school conflicts, there were no significant differences between the strategies used in school and in the home. Students used the strategies learned in school just as frequently in the home as they did in the school.

Resolutions

On the Conflict Report Form students were asked to report the nature of the resolution of the conflict. Very few of the conflicts were reported to be arbitrated by adults or resolved through forgiving in either the control or experimental groups. The number of integrative solutions which resulted in both sides achieving their goals was much higher in conflicts among trained (rather than untrained) students. Untrained students left many conflicts unresolved. There was no significant difference between the solutions arrived at for conflicts in school or at home. Only one study had the necessary analyzes to determine an effect size (ES = 0.73). This indicates that trained students tend to find more constructive resolutions than do untrained students.

Transfer Of Training: Spontaneous Use Of Negotiation And Mediation Procedures In Nonclassroom And Nonschool Settings

An important issue in conflict training is whether the procedures and skills learned will transfer to nonclassroom and nonschool settings. Three types of measures were used to determine the extent of transfer:

1. The spontaneous use of the negotiation and mediation procedures in settings other than the classroom.
2. Written descriptions of conflicts students were involved in outside of the classroom.
3. Systematic observation of students in nonclassroom settings.

The integrative negotiation and mediation procedures students learned in the classroom did generalize to nonclassroom and nonschool situations. The use of the procedures was reported on the playground, in the lunchroom, in the hallways, on school buses, and in the home. Students spontaneously wrote stories about using the negotiation and mediation procedures, students spontaneously presented skits in the school variety show involving the negotiation and mediation procedures, and parents reported that students used the negotiation and mediation procedures and skills with their brothers and sisters, their neighborhood friends, and even their pets.

In a number of studies, students regularly filled out Conflict Report Forms detailing the conflicts they were involved in and how they were resolved. Over half of these conflicts occurred in the home. An example from a fourth-grade student is, "*My conflict was when me and my brother were fighting about who would get the dry baseball and who would get the wet one. So me and my brother did conflict resolution and it ended up that I first got the wet ball and my brother got the dry ball, then I got the dry ball and my brother got the wet ball.*"

Finally, students were directly observed on the playground and other nonclassroom settings in the school (Johnson, Johnson, Dudley, Acikgoz, 1994; Stevahn, Johnson, Johnson, Oberle, & Wahl, 2000). The conflicts were classified as either low-investment or high-investment. **Low-investment conflicts** were usually light-hearted and usually lasted thirty seconds or one minute. An example of a low-investment conflict is a girl who wanted to give a picture to somebody and

asked, "*Who wants this*?" More than one student wanted it and a conflict started. When one of the students got the picture, the others stopped and began to laugh, one of them said, "*Do you see what you gave up*?" The entire conflict lasted about one minute and did not consume any of the classes emotional or academic energy. Formal negotiation and mediation procedures were not used, even by trained students. **High-investment conflicts** affected the students emotionally by detracting from the students' ability to work academically, or interact with classmates in a positive manner. Often times these conflicts would last for days or longer. Once trained, students involved in high-investment conflicts did enter into integrative negotiations and seek out mediation. A group of sixth grade girls, for example, engaged in a prolonged conflict over who were "best friends" and who were no longer "best friends." In a fifth-grade class Bill and his friends believed Doug and his friends were passing notes saying nasty things about Bill. Doug denied it. But Bill responded, "*since you are doing it to us we are going to do it to you.*" So Bill and his friends started passing nasty notes about Doug. The resulting conflict took several days to resolve and required mediation. Another example occurred when two girls became very angry at each other because both wanted the same part in a play. Mediation was finally required. Trained students were observed to be very high on effort to resolve the conflict, attentive listening to each other, emotional seriousness about the conflict and its resolution, commitment to the negotiation and mediation procedures, and expression of personal respect for the other individuals involved.

Distributive ("Win-Lose") Versus Integrative (Problem-Solving) Negotiations

A number of studies examined the impact of the Peacemaker training on the students' approach to negotiating. Students were placed in a negotiation simulation involving the buying and selling of commodities in which they could adopt a "win-lose" (maximize own outcomes) or an integrative (maximize joint outcomes) negotiation approach. Students who had received the Peacemaker training used the integrative approach significantly more frequently than did the

untrained students. No untrained student adopted an integrative approach to negotiations while almost all students in the experimental condition did so. From Table 2 it may be seen that the average effect size was 0.98. Trained students were more likely to engage in integrative negotiations than were untrained students.

Academic Achievement

The Peacemaker Training has been integrated into both English literature and history academic units to determine its impact on academic achievement. The basic design for these studies was to randomly assign students to classes in which the Peacemaker training was integrated into the academic unit studied or to classes in which the academic unit was studied without any conflict training. Students in the experimental classes both studied the academic material and learned the negotiation and mediation procedures. Students in the control classes spent all their time studying the novel. Students who received the Peacemaker training as part of the academic unit tended to score significantly higher on achievement and retention tests than did students who studied the academic unit only. Students not only learned the factual information contained in the academic unit better, they were better able to interpret the information in insightful ways. The higher achievement is all the more notable as students in the control classes spent all their time studying the academic material, while students in the experimental classes had to learn both the novel and the negotiation and mediation procedures in the same amount of time. From Table 2 it may be seen that the average post-test effect size was 0.88 and the average retention effect size was 0.70.

Linking conflict resolution training with academic learning is important, as the history of innovations in schools indicates that new programs are not widely adopted and maintained over a number of years unless they increase students' academic achievement. The integration of conflict resolution training into academic units, furthermore, provides an arena in which frequent and continued practice of the conflict resolution procedures can take place.

Attitudes Toward Conflict

Attitudes toward conflict was measured by a word association task. One of the goals of conflict resolution and peer mediation training is to create positive attitudes toward conflict. Before training, overwhelmingly the students held negative attitudes toward conflict seeing almost no potential positive outcomes. While still perceiving conflict more negatively than positively, the attitudes of trained students became markedly more positive and less negative while the attitudes of untrained students stayed essentially the same (highly negative). The average effect size was positive attitudes toward conflict was 1.07 and for negative attitudes was -0.61.

Interviews Of Teachers, Principals, And Parents

A number of participating teachers and principals were interviewed. All endorsed the program. The teachers reported that the training resulted in conflicts among students becoming less severe and destructive and, therefore, the classroom climate became more positive and the teachers (and principals) spent much less time resolving conflicts among students. Conflicts referred to them were reduced by 80% and the number of conflicts referred to the principal was reduced to zero. The teachers and principals interviewed said that without qualification they would become involved in the training in the future. One teacher commented, "*The negotiation and mediation skills we are teaching our students will have a definite positive impact on the way our students interact with each other...these skills go beyond the scope of the classroom, and contribute to the betterment of our community, and our world.*" Parents reported that students mediated conflicts at home and in other contexts from the school. A third grade girl, for example, attempted to mediate a conflict between her older sister and the older sister's boyfriend while the three of them were at a drive-in movie theater. In one family the parents were arguing over whether to refinish the dining room table after her younger brother accidentally spilled nail polish on it. In the midst of their heated argument the fourth grader interrupted and mediated the conflict. She took her parents through all the steps of resolving conflicts. Many parents whose children were not part of the project requested that their children receive the training next year. A

number of parents of trained children requested that they themselves receive the training so that they could use the negotiation and mediation procedures to manage conflict management in the family.

Discussion

Concern about the way in which children, adolescents, and young adults manage their conflicts has led to numerous conflict resolution and peer mediation training programs. Few of these programs have been evaluated (Johnson & Johnson, 1996). Only one, **Teaching Students To Be Peacemakers** (Johnson & Johnson, 1995a), has generated a series of research studies. This article contains a meta-analysis summarizing the results of these seventeen studies.

The results indicate that students are involved in conflicts with each other daily and either refer the conflict to the teacher for arbitration or use destructive strategies that tended to escalate the conflict. The vast majority of students did not know how to negotiate resolutions to conflicts. In suburban schools studied, the conflicts dealt with control of resources, preferences, and verbal and physical aggression and playground issues, while in inner-city schools studied the conflicts dealt with violence and aggression. In light of these findings, educators are justified in being concerned about the occurrence of conflicts in schools and the way students resolve their conflicts.

A major barrier to ensuring that conflicts are managed constructively is students' lack of knowledge of and skill in using effective conflict resolution procedures. Students do have procedures for managing conflicts, but often the procedures are not constructive and different students use different strategies. Especially when students are from different cultural, ethnic, social class, and language backgrounds the different strategies used to manage conflicts may create some chaos. Life in schools gets easier when <u>all</u> students (and staff members) use the same set of negotiation and mediation procedures in managing conflicts.

Given the extent of the problems, an important issue is whether conflict resolution training will change the way students behave in conflict situations. The results of our research indicate

that students do in fact learn how to negotiate and mediate to a total recall level. The conflict resolution and peer mediation training, however, can only be considered successful if students retain what they have learned over a long period of time. Throughout the academic year, months after students received their training, almost all trained students maintained their knowledge about negotiation and mediation. One possible explanation for the high rate of retention is that students were using the procedures to manage their day-to-day conflicts with classmates and peers.

Knowing what the procedures are, however, does not mean that students will be able to apply them in real-life conflicts. The results of the scenario measures (written, interview, and videotaped simulation) indicate that trained students were able to apply the negotiation and mediation procedures to actual conflicts. Observation results and interviews with teachers, principals, and parents indicate that students did use the negotiation and mediation procedures in playground, neighborhood, and family settings. Even though the types of conflicts students face differ in school and home situations, the results of our studies indicate that the negotiation and mediation procedures were used in both settings.

Not only can students be taught how to negotiate and mediate, the training can be integrated into instructional units in ways that promote academic achievement. When the Peacemaker training was integrated into an English literature class, academic achievement increased even though time was taken away from studying the novel to learn the negotiation procedure. Since much of literature, history, and science deals with conflicts, the possibilities of integrating conflict resolution training and subject matter learning seem quite possible and promising.

Just because students knows the procedures for integrative negotiations does not mean they will also do so. They can still go for a "win" when faced with a conflict with peers. When placed in a conflict situation in which either a distributive ("win-lose") or an integrative ("problem-solving") negotiation strategy could be used, all untrained students used the "win-lose" strategy, students who had the Peacemaker training primarily used the integrative strategy.

This finding not only confirms the effectiveness of the training, it also provides a bridge to the overall research efforts on conflict in the social sciences.

In our studies, the adults in the school perceived the peer mediation program to be constructive and helpful. Teachers, principals, and parents stated the conflict resolution program reduced the incidence of destructively managed conflicts and resulted in a more positive classroom climate. The implication is that when students regulate their own behavior, the need for teachers and administrators to monitor and control student actions declines. The fewer the discipline problems teachers have to manage, the more teachers can devote their energies to teaching.

Finally, the success in training children as young as kindergartners in the Peacemaker procedures fills an important gap in the research on conflict resolution training in the schools.

Learning how to manage conflicts constructively may have consequences for cognitive, social, moral, and psychological development (Johnson & Johnson, 1989, 1995a, 1995b). Teaching students how to (a) negotiate integrative agreements to resolve conflicts and (b) mediate schoolmates' conflicts may, for example, increase students' ability to regulate their own behavior and give them a developmental advantage over peers who have not been so trained. Self-regulation is the ability to act in socially approved ways in the absence of external monitoring by others. It is a central and significant hallmark of cognitive, social, and moral development. The opposite of self-regulation is adult monitoring and control. When adults in children's lives act as referees and judges, adults place children in a dependent position and deprive them of opportunities to learn valuable self-regulation and social skills. The more students master and use the integrative negotiation and mediation procedures, the more they independently regulate their own behavior and the less monitoring and control required by adults. In addition, children and adolescents who are able to negotiate and mediate may have a developmental advantage over children who do not know how to do so. When faced with conflicts in school, work, home, or leisure settings, they may be able to be more successful in negotiating agreements that maximize mutual benefit and increase the quality of the relationship.

While any conclusions drawn from our studies have to be tentative, the implications are interesting. Children and adolescents have frequent conflicts daily in school. Without training, they tend to manage their conflicts in destructive ways. When given training, they learn how to engage in integrative negotiations and how to mediate their schoolmates' conflicts and they maintain their ability to do so months after the training has ended. They apply the learned procedures to actual conflicts in classroom, school, and family settings. Learning the negotiation and mediation procedures can be integrated with academic learning in a way that enhances subject matter understanding. Trained students tend to stick with an integrative approach to negotiations, even when they are tempted to go for a "win." The adults in the school, furthermore, develop positive attitudes toward and perceptions of the conflict resolution training and its impact on students. These implications set the stage for teaching all students in every school how to manage conflicts in constructive ways. The systematic results from our studies add important empirical confirmation to the anecdotal testimonies to the effectiveness of peer mediation in schools and provide validation of the assumptions underlying the total student body approach to peer mediation.

The conclusions and implications of our studies are both strengthened and limited by the nature of the research methodology. The strengths of the studies are in the diversity of the schools and students studied (suburban and urban), the variety of age groups included in the studies (first through ninth), the fact that two different approaches to peer mediation were studied (total-student-body and cadre), the frequency with which control groups were included, the randomly sampling of students and classrooms, the rotation of teachers across conditions, the inclusion of schools from two different countries (United States and Canada), the long duration of the studies (up to eight months), the careful development and validation of the dependent variables, the grounding of the Peacemaker Program in conflict resolution theory (constructive conflict [Deutsch, 1973], perspective taking [Johnson, 1971], communication in conflict situations [Johnson, 1974], and integrative negotiations [Johnson, 1967; Pruitt, 1981]), and the careful controlled way in which the studies were carried out. In addition, these studies were

carried out in the "real life" setting of schools. While there is a great deal of research in the field of conflict resolution, almost all of it consists of small, tightly-controlled, experimental studies of short duration conducted in the laboratory. Relatively few studies that examine the effectiveness of the recommended procedures in "real-life" settings such as schools over a relatively long period of time.

Despite these strengths, however, the results of our studies are limited by the specific operationalizations of the independent and dependent variables used, the ability of the teachers to implement the training programs, the ages of the students involved, the ethnicity of the students (caucasion and black only), the geographic locations of the school districts (midwest and North American), and many other factors. Considerable more research is needed on teaching students how to negotiate and mediate effectively and on the operation of peer mediation programs in the schools. Future investigations need to continue to identify and examine the variables that mediate the effectiveness of conflict resolution training. The conditions need to be established under which academic learning and conflict resolution training may be integrated to enhance each other's effectiveness. Another productive avenue of work would be to compare the effectiveness of cadre and total-student-body approaches to peer mediation to delineate (a) their comparative strengths and weaknesses and (b) the conditions under which each will have optimal effects. Finally, it would be useful to examine the interaction between trained and untrained students when they are in conflict with each other.

Every student needs to learn how to manage conflicts constructively. Without training, many students may never learn how to do so. Teaching every student how to negotiate and mediate will ensure that future generations are prepared to manage conflicts constructively in career, family, community, national, and international settings. There is no reason to expect, however, that the process will be easy or quick. It took over 30 years to reduce smoking in America. It took over 20 years to reduce drunk driving. It may take even longer to ensure that children and adolescents can manage conflicts constructively. The more years students spend

learning and practicing the negotiation and mediation procedures, the more likely they will be to actually use the procedures skillfully both in the classroom and beyond the school door.

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Table 1 Summary Of Conflict Resolution And Peer Mediation Studies

Study	Year	Setting	School	Grades	Training Length	Sample Size	Control	Random -ization	Teacher Rotation
Johnson, Johnson, & Dudley	88 - 89	Suburban	Cornelia Elementary, Edina, MN	1 - 6	15 Hours, 30 Days	138 (WC)	Yes	Control Classes Randomly Selected	Yes
Johnson, Johnson, Dudley, Acikgoz	90 - 91	Suburban	Highlands Elementary, Edina, MN	1 - 6	15 Hours, 30 Days	92 (WC)	No	Classes Randomly Selected	Yes
Johnson, Johnson, Dudley, Magnuson	91 - 92	Suburban	Creek Valley Elementary, Edina, MN	2 - 5	9 Hours, 15 Days	227 (WC)	Yes	Classes Randomly Selected	No
Johnson, Johnson, Dudley, Ward, Magnuson	91 - 92	Suburban	Creek Valley Elementary, Edina, MN	2 - 5	9 Hours, 15 Days	227 (WC)	Yes	Classes Randomly Selected	No
Johnson, Johnson, Mitchell, Cotton, Harris, Louison	91 - 92	Urban	Miller Park Elementary Omaha, NE	3 - 4	10 Hours, 1.5 Days	47 (Cadre)	No	None	NA
Johnson, Johnson, Cotton, Harris, Louison	92 - 93	Urban	Miller Park Elementary, Omaha, NE	3 - 4	10 Hours, 1.5 Days	39 (Cadre)	No	None	NA
Johnson, Johnson, Cotton, Harris, Louison	93-94	Urban	Miller Park Elementary, Omaha, NE	3-4	10 Hours, 1.5 Days	34 (Cadre)	No	None	NA

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Study	Year	Setting	School	Grades	Training Length	Sample Size	Control	Random-ization	Teacher Rotation
Johnson, Johnson, Dudley, Mitchell, Fredrickson	93 - 94	Suburban	Valley View Middle School, Edina MN	6 - 9	14 Hours, 12 Weeks	235 (WC)	Yes	Control Classes Randomly Selected	Yes
Dudley, Johnson, Johnson	93 - 94	Suburban	Valley View Middle School, Edina, MN	6 - 9	14 Hours, 12 Weeks	235 (WC)	Yes	Control Classes Randomly Selected	Yes
Stevahn, Johnson, Johnson, Green, Laginski	93 - 94	Rural, Suburban, Canada	Durham High School, Ontario	9	9.5 Hours, 2 Weeks	40 (WC)	Yes	Students Assigned To Conditions	Yes
Stevahn, Johnson, Johnson, Real	94 - 95	Rural, Suburban, Canada	Durham Region K - 8, Ontario	7 - 8	23 Hours, 4 Weeks	111 (WC)	Yes	Students Assigned To Conditions	Yes
Stevahn, Johnson, Johnson, Laginski, O'Coin	94 - 95	Rural, Suburban, Canada	Durham High School Ontario	9	10 Hours, 4 Weeks	42 (WC)	Yes	Students Assigned To Conditions	Yes
Stevahn, Johnson, Johnson, Schultz	95-96	Suburban	Mount Diablo, HS Concord, CA	9	17 ½ Hours, 3 Weeks	92	Yes	Classes Assigned To Conditions	No (Same)
Stevahn, Johnson, Johnson, Oberle, Wahl	96-97	Suburban	Highlands Elementary, Edina, MN	Kinder-garten	9 Hours, 4 Weeks	80	Yes	Students Assigned To Conditions	Yes
Stevahn, Munger, Kealey	97-98	Suburban	Dorval, Quebec	K – 6	6 Months	302	No	None	No
Stevahn, Johnson, Johnson, Oberle, & Wahl	99-00	Suburban	Highlands Elementary, Edina, MN	Kinder-garten			Yes	Students Assigned To Conditions	Yes

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Table 2: Mean Effect Sizes Peacemaker Studies

Dependent Variable	Mean	Standard Deviation	Number Of Effects
Learned Procedure	2.25	1.98	13
Learned Procedure – Retention	3.34	4.16	9
Applied Procedure	2.16	1.31	4
Application – Retention	0.46	0.16	3
Strategy Constructiveness	1.60	1.70	21
Constructiveness – Retention	1.10	0.53	10
Strategy Two-Concerns	1.10	0.46	5
Two-Concerns – Retention	0.45	0.20	2
Integrative Negotiation	0.98	0.36	5
Quality of Solutions	0.73	0	1
Positive Attitude	1.07	0.25	5
Negative Attitude	-0.61	0.37	2
Academic Achievement	0.88	0.09	5
Academic Retention	0.70	0.31	4